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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/887,665      | 01/12/2000  | KOJI MINAMI          | 0925-0154P          | 9884             |

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EXAMINER

YENKE, BRIAN P

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 06/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/887,665

Applicant(s)

MINAMI ET AL.

Examiner

BRIAN P. YENKE

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on PreAmendment 22 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11-17 added (claims 1-10 cancelled by PreAmendment) is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

### **DETAILED ACTION**

1. The current application 09/887,665 (originally 09/481391) is the result of a Double Patenting rejection based on applications 09/481,391 (now abandoned) and application 09/369,310, where both applications were identical. The request for a Petition by applicant (09 April 2001) stating that an incorrect application was filed, was granted/approved 05 September 2001. However, the current application as filed, is also identical to another application, specifically application 09/749,642, filed 28 December 2000. Therefore, the examiner is providing a new Double Patenting Rejection in this Office Action.

### **Drawings**

2. The drawings are objected to because Fig 3 states "Prior Art", however based upon specification, the applicant utilizes this drawing as the invention, therefore it is assumed by the examiner that Fig 3 should not have "Prior Art" annotated therein. Therefore, if Fig 3 is not "Prior Art", the statement "Prior Art" should be deleted from the figure. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3a. Claims 11-13, 15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Kunzman et al., US 6,054,832.

In considering claims 11-12 and 15;

- a) the claimed light source...**is met by lamp 14 (Fig 1)**
- b) the claimed light-transmitting filters...**is met by color wheel 18 which includes a respective blue, red, green and clear (white) (50, 54) color segments (Fig 4)**
- c) the claimed light valve...**is met by spatial light modulator 28 (Fig 1)**
- d) the claimed white light-transmitting filters...**is met where the color wheel 18 clear filter segments (50,54) are used to increase the color efficiencies (col 2, line 15-35) and to control the brightness for all areas of the image, making dark areas appear correctly, while not washing out the bright areas (col 3, line 11-21), where the clear (white) filters are used to properly transmit the correct colors at the**

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proper timing, where the clear segment is used to transition properly between segments, which would correspond to the lower-order bits (col 4, line 38-44)

e) the claimed non-white light-transmitting filters...is met where the red, green and blue filters correspond inherently to the higher-order/majority of the bits of the image data.

In considering claims 13 and 17,

The claimed wherein if a brightness required by the input data...is met by Kunzman Which utilizes the clear (white) segments of the color wheel 18 to adjust the dark states/areas of the image and the brightness state/area of the image (col 3, line 11-22, line 59-67 to col 4, line 1-9)

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kunzman et al., US 6,054,832 and applicants admitted prior art.

In considering claim 14,

Kunzman does not specifically disclose a spatial light modulator that reflects, Kunzman discloses a spatial light modulator (light valve) which is used to (transmit) the display received image data onto a display.

The use of a spatial light modulator such as a digital micro-mirror device (DMD) is a well-known type of modulator which transmits/reflects image data by either being in the on/off state, which increase the overall efficiency of the display system, by decreasing dead/lag times between color-changes.

As disclosed by applicant Fig 2, Page 2, line 20, the use of a DMD device is a conventional light valve which is used to display image data, where the DMD device is either in an Off or On state.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Kunzman, which discloses an electronically programmable color wheel to increase the efficiency of the displayed image, by eliminating transitions between colors and increasing brightness, with a conventional light valve's such as a DMD which is used to increase the efficiency of a displayed image.

In considering claim 16,

Kunzman does not specifically disclose/discuss a value which is obtained by integrating the product of spectral transmission factor of the white light filters and the spectral luminous efficiency with respect to wavelength being less than the sum of values of the non-white filters in the calculation.

However, as disclosed by applicant's admitted prior art, Fig 2, a color wheel with filter segments Crd, Cgd, Cbd of lower transmissivity to increase the grey scale of the image data, where the filter segments Crd, Cgd and Cbd have a transmissivity of 1/8 their respective filters Cr, Cg and Cb. The filter segments Crd, Cgd, and Cbd, are used to increase the grey scale (brightness) of the displayed image.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify Kunzman, which discloses a display system which utilizes clear/white segments in a color-wheel to increase the efficiency and brightness of a displayed image, with applicant's admitted prior art, which would produce a value (as claimed) where the value of the clear (white) filter is less than the non-clear (white) filters (R,G,B), since the clear filter segments are used to enhance the color/brightness of a displayed color image (not a black-white image).

### ***Double Patenting***

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefore ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5a. Claims 11-17 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-7 of copending Application No. 09/749,642. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

5b. Claims 11-17 are directed to the same invention as that of claims 1-7 of commonly assigned copending Application No. 09/749,642. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231


**or faxed to:**

**(703) 872-9314**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-4700.

B.P.Y.

12 June 2002

  
**JOHN MILLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**